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(71) Applicants and

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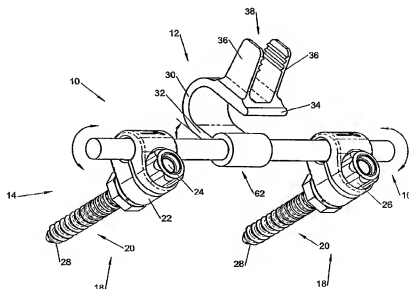
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(81) **Designated States (unless otherwise indicated, for every kind of national protection available):** AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG,

[Continued on next page]

(54) Title: INTERSPINOUS VERTEBRAL AND LUMBOSACRAL STABILIZATION DEVICES AND METHODS OF USE



(57) **Abstract:** Implantable devices are provided for stabilizing adjacent vertebrae and the lumbosacral region of a patient. The devices can comprise an interspinous flexible spacer body (12) having a substantially U-shape comprising a superior section (34), an inferior section (32), and a midsection (30) extending therebetween. The superior and/or inferior sections can include a pair of lateral walls (36) configured to engage a spinous process of a vertebra. Fixation caps can be provided for securing a spinous process of a vertebra to the flexible spacer body. To secure the flexible spacer body between the lumbar vertebra and an adjacent vertebra, an anchor assembly (14) is provided. Also provided are methods of using the implantable devices to stabilize a patient's spine.



SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US,  
UZ, VC, VN, YU, ZA, ZM, ZW.

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- (88) **Date of publication of the international search report:**

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*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2006/013150

A. CLASSIFICATION OF SUBJECT MATTER  
INV. A61B17/70 A61F2/44

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

A61B A61F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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☒ Further documents are listed in the continuation of Box C.☒ See patent family annex.

## \* Special categories of cited documents:

\*A\* document defining the general state of the art which is not considered to be of particular relevance

\*E\* earlier document but published on or after the international filing date

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\*O\* document referring to an oral disclosure, use, exhibition or other means

\*P\* document published prior to the international filing date but later than the priority date claimed

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\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

\*Z\* document member of the same patent family

Date of the actual completion of the international search

16 October 2006

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26/10/2006

Name and mailing address of the ISA/

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## INTERNATIONAL SEARCH REPORT

International application No

PCT/US2006/013150

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Y	the whole document	7, 10, 16-20, 23, 39-45, 49, 50, 52, 61-63, 67, 68, 72, 75-91, 106-113, 117, 118, 120, 127-130, 137-139, 144, 147, 153-157, 160, 182, 185, 223, 224, 227-231, 238, 240, 246-249, 254, 256-258, 261-268, 291, 292 283-285
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## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2006/013150

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Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	EP 1 330 987 A (BIOMET MERCK FRANCE; ELBERG, JEAN-FRANCOIS; INDUSTRIAS QUIRURGICAS DE) 30 July 2003 (2003-07-30) column 3, paragraph 23 - column 6, paragraph 41 figures 3,7,8	7,75,144
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 International application No.  
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International application No

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
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Y		23, 91, 160, 182, 185, 186, 223, 224, 227-231, 236-238, 240, 243-249, 254-258, 261-268
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A	column 1, paragraph 1 column 3, paragraph 22 - column 4, paragraph 28 figure 7	1, 121
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International application No  
PCT/US2006/013150

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
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# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US2006/013150

## Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 293-319  
because they relate to subject matter not required to be searched by this Authority, namely:  
Rule 39.1(iv) PCT - Method for treatment of the human or animal body by surgery
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

## FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

## 1. claims:

1-9,11-17,21,22,36-38,53-55,58-60,62,  
121-124,132-136,139-146,148-15  
4,158,159,174-176

An implantable device for stabilizing a lumbar region of a patient having variable flexibility.

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## 2. claims: 10,147

Malleable properties of an implantable device for stabilizing a lumbar region of a patient.

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## 3. claims: 18-20,155-157

An implantable device for stabilizing a lumbar region of a patient containing biologically active materials.

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## 4. claims: 23-29,160-166,182-268

Closure means for an implantable device for stabilizing a lumbar region of a patient.

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## 5. claims: 30-35,56,57,125,126,167-173,269-292

An implantable device for stabilizing a lumbar region of a patient having selectively movable lateral walls.

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## 6. claims: 39-52,63-120,127-131

An implantable device for stabilizing a lumbar region of a patient including an anchor assembly comprising a support rod.

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## 7. claims: 61,137,138

An implantable device for stabilizing a lumbar region of a patient having a system for securing the device within the sacral canal.

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## 8. claims: 177-181

Multi-component construction of an implantable device of the type claimed.

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FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2006/013150

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